

10/527 495
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PATENT APPLICATION
Docket No. UBC.P-034

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Withers, et al. Application No.:
Filing Date: Confirmation No.:
Title: Engineered Enzymes and Their Use for Synthesis of Thioglycosides

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P O Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant requests that the references cited on the attached substitute form 1449 be included in the record of the above-referenced patent application. Copies of the references are provided herewith.

No fee is believed to be due with this paper as three months have not passed since filing and we have not received an action on the merits. However, should it be deemed necessary, the Commissioner is authorized to debit any additional fees deemed due from Deposit Account No. 15-0610.

Respectfully submitted,
OPPEDAHL & LARSON, LLP

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Substitute for form 1449A/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	10/527 495
Sheet	1	of	1	Filing Date	
				First Named Inventor	Withers et al.
				Art Unit	
				Examiner Name	
				Attorney Docket Number	UBC.P-034

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ -Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		WO 97/21822	June 19, 1997	Withers, et al.		

NON PATENT LITERATURE DOCUMENTS							
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.					T ²
		BOLAM, ET AL. , "Mannanase A from <i>Pseudomonas fluorescens</i> ssp. <i>cellulosa</i> Is a Retaining Glycosyl Hydrolase in Which E212 and E320 Are the Putative Catalytic Residues"; 1996, Page(s) 16195-16204, Volume 35, Number 50, Publisher: Biochemistry, American Chemical Society, Published in: Easton, PA, USA					
		JAHN, ET AL. , "Thioglycoligases: Mutant Glycosidases for Thioglycoside Synthesis"; January 20, 2003, Page(s) 352-354, Volume 42, Number 3, Publisher: Angewandte Chemie Int. Ed.					
		NIKOLOVA, ET AL. , "Transglycosylation by Wild Type and Mutants of a β -1,4-Glycosidase from <i>Cellulomonas fimi</i> (Cex) for Synthesis of Oligosaccharides"; 1996, Page(s) 19-25, Volume 799, Publisher: Annals of the New York Academy of Sciences, New York Academy of Sciences, Published in: New York, NY, USA					
		ONG, ET AL. , "Enzyme immobilization using a cellulose-binding domain: Properties of a β -glucosidase fusion protein"; January, 1991, Page(s) 59-65, Volume 13, Number 1, Publisher: Enzyme and Microbial Technology, Published in: Stoneham, MA, USA					
		WANG, ET AL. , "Identification of the Acid/Base Catalyst in <i>Agrobacterium faecalis</i> β -Glucosidase by Kinetic Analysis of Mutants"; November 7, 1995, Page(s) 14554-14562, Volume 34, Number 44, Publisher: Biochemistry, American Chemical Society, Published in: Easton, PA, USA					
		WITCZAK, ET AL. , "Synthesis of L-Fucopyranosyl-4-Thiodisaccharides from Levoglucosenone and Their Inhibitory Activity on α -L-Fucosidase"; September 21, 1995, Page(s) 2169-2174, Volume 5, Number 18, Publisher: Bioorganic & Medicinal Chemistry Letters, Published in: Oxford, GB					

Examiner Signature		Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.